

III. Remarks

The Examiner's careful consideration is appreciated. To more distinctly define the invention, claim 1 is replaced by claim 7 and claims 2-5 are amended; claims 8-20 are added; claims 1 and 6 are cancelled without prejudice.

The respective paragraphs of the DETAILED ACTION are discussed below.

1. Claims 1-6 were considered.

2-3. To clarify claim 4, "points" is added to characterize the mesh data elements utilized in an assembly.

4-5. Claims 1-3, 5 and 6 were rejected in view of Faruque *et al.* under 35 USC Section 102(e). Claim 1 is replaced by claim 7 and claims 2-5 are amended to clarify and distinctly point out subject matter sought to be patented. Claim 6 is cancelled. In independent claim 7, replacing claim 1, a task group associated with a mechanical assembly accesses parts and weld data from a library; a network links the library to work stations of task group members; the work stations associate parts and welds and build an assembly for a virtual simulation in which the characteristics of the assembly are returned to the library such that the assembly and the characteristics of the assembly become available for retrieval as a part identified in the library. Faruque *et al.* address the quality of mesh models showing a single work station passing on a mesh model for analysis. The invention of claim 7 is directed to a group with multiple participants and functionalities - all providing feedback to the library, in assembly development, mesh refinement, and virtual evaluation of an assembly. The invention, as claimed, integrates functions of design, functions of design refinement in an

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assembly sequence and functions of testing in a design cycle involving a continuum of refinement, thus distinguishing over the single station and single function of mesh evaluation described in Faruque *et al.* Dependent claims 2, 3 and 5 are similarly distinguishable wherein the assembly is refined in view of a simulation and the assembly is updated in the list, the material properties to the meshed parts are recorded, and the simulation evaluation[s] involve[s] crash impact, durability and/or noise. Thus, applicant submits that the rejection in view of Faruque *et al.* under 35 USC Section 102(e) should be withdrawn.

6-9. Claim 4 was rejected in view of Faruque *et al.* under 35 USC Section 103. Claim 4 now depends on claim 7 and is distinguishable as is claim 7. As clarified, the number of stated points meshed in an assembly, as built in the system of new claim 7, is set out in claim 4. Applicant thus submits that the statement of the invention as a whole in amended claim 4 is not rendered obvious by Faruque *et al.*

10. The other prior art of record is noted.

11. Entry of the amendment, reexamination and reconsideration, and allowance of the application are requested.

Claims 8-20 are added to define embodiments of the invention. Independent claim 8 relates to a continuous loop for data assembled and tested in the design process. Dependent claims 9-12 define, in the loop, examples wherein feedback to the library results in an assembly for commercial release; tags identify connections between parts; a beginning to end design process is involved; and noise, crash and durability

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simulations are conducted. In claims 13 and 15, imperfections in the mesh are identified and fixed, and, modifications made in any stage of the design process are accessible in the library. New claims 17-18 depend upon independent claim 8. New claims 19-20 are depend upon independent claim 7. Respectively the dependent claims define systems in accord with claims 8 and 7 wherein the network links more than one of a design work station, an assembly work station and a simulation work station; and each of a design work station, an assembly work station and a simulation testing work station. The dependent claims 17 and 20 also define a task group associated with a motor vehicle assembly. Applicant submits that the new claims are neither described by nor rendered obvious by the cited references.

Should the Examiner have any questions or suggestions in view of the foregoing, applicant's undersigned attorney requests that the Examiner initiate a telephone call to the undersigned.

Respectfully submitted,




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CERTIFICATE OF FILING BY FACSIMILE TRANSMISSION: I certify that the foregoing Amendment and Response To the Office Communication Mailed on July 27, 2006 accompanied by Transmittal Form [PTO/SB/21] are being filed by facsimile transmission on October 25, 2006 to Group Art Unit 2123, Attention: Examiner

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